

CARBON NANOTUBE PARTICULATES, COMPOSITIONS AND USE THEREOF

ABSTRACT

5 A method for making carbon nanotube particulates involves providing a catalyst comprising catalytic metals, such as iron and molybdenum or metals from Group VIB or Group VIIIB elements, on a support material, such as magnesia, and contacting the catalyst with a gaseous carbon-containing feedstock, such as methane, at a sufficient temperature and for a sufficient contact time to make small-diameter carbon nanotubes
10 having one or more walls and outer wall diameters of less than about 3 nm. Removal of the support material from the carbon nanotubes yields particulates of enmeshed carbon nanotubes that retain an approximate three-dimensional shape and size of the particulate support that was removed. The carbon nanotube particulates can comprise ropes of carbon nanotubes. The carbon nanotube particulates disperse well in polymers and show
15 high conductivity in polymers at low loadings. As electrical emitters, the carbon nanotube particulates exhibit very low "turn on" emission field.